

ABSTRACT

A method for distributed agent based non-expert simulation of manufacturing process behavior on a single-processor computer comprises the steps of: object modeling a manufacturing technique having a plurality of processes; associating a distributed agent with each the process; and, programming each the agent to respond to discrete events corresponding to the manufacturing technique, wherein each discrete event triggers a programmed response. The method can further comprise the step of transmitting the discrete events to each agent in a message loop. In addition, the programming step comprises the step of conditioning each agent to respond to a discrete event selected from the group consisting of a clock tick message, a resources received message, and a request for output production message.